



# ISOSTEM

Molecular Solution to Skin Blemish



Anti Spot  
Skin Brightening  
Skin Whitening



**ACTV**  
BIOTECH

## Molecular Solution to Skin Blemish

### Effects

- Shows strong anti-tyrosinase activity.
- Suppresses excess melanin synthesis.
- Reduces skin blemishes.
- Balances the skin tone and brightens the skin

### Origin

Developed from Glycine max (Soy) stem cells using ProlCell® Technology.



### What is ProlCell® Technology?

ProlCell® Technology enables to benefit the effects of plant stem cells and small RNAs in their vesicles.

### Effect Mechanism

ProlCell® IsoStem contains enriched stem cell components and stem cell specific exogenous small RNAs thanks to the elicitor application.

### What is the effect of small RNA?

Small RNAs, including miRNA are non-coding RNA fragments, which regulate the post-transcriptional silencing of target genes. Plant small RNAs may exert similar functions in both human and plant. This provides exogenous plant small RNAs to play a key role on the physiological function of the human body, including the skin.



# Activity Tests

## In vitro Tests

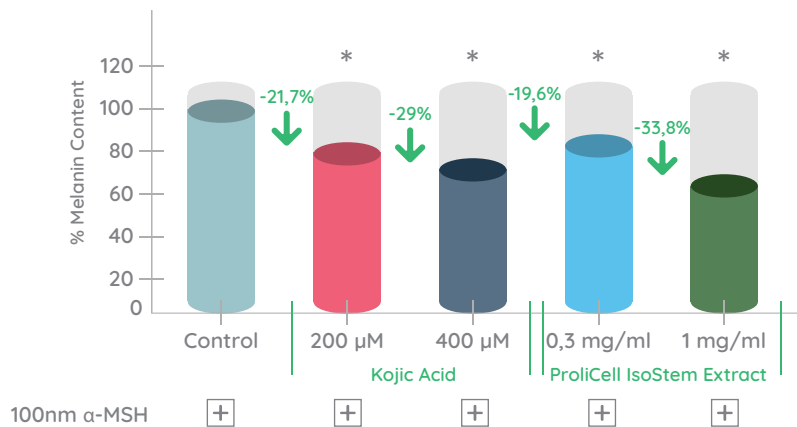
**Cell Line:** Mouse melanoma cells

**Test Component:** ProliCell IsoStem extract

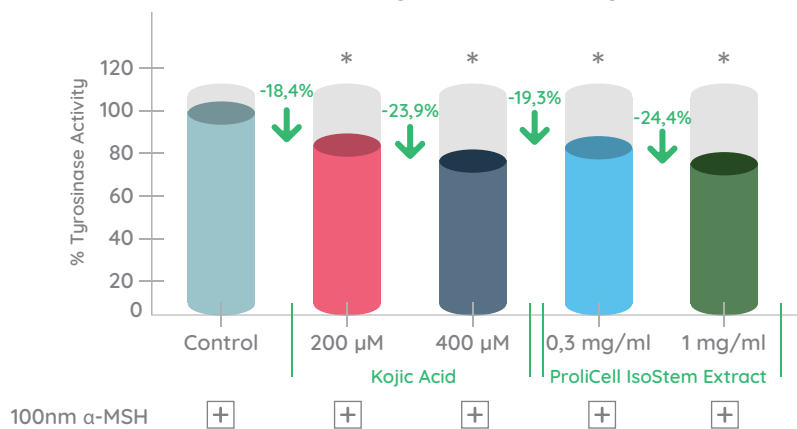
**Parameters:** Determination of melanin content by in vitro melanin content determination test, Determination of tyrosinase inhibition activity by in vitro anti-tyrosinase test, Analysis of the expressions of TYR, TYRP1, TYRP2 and MITF genes by RT-qPCR, Western blot analysis of the expression of TYR, TYRP1, TYRP2 and MITF proteins.



### Effect on Melanin Content



### Effect on Tyrosinase Activity

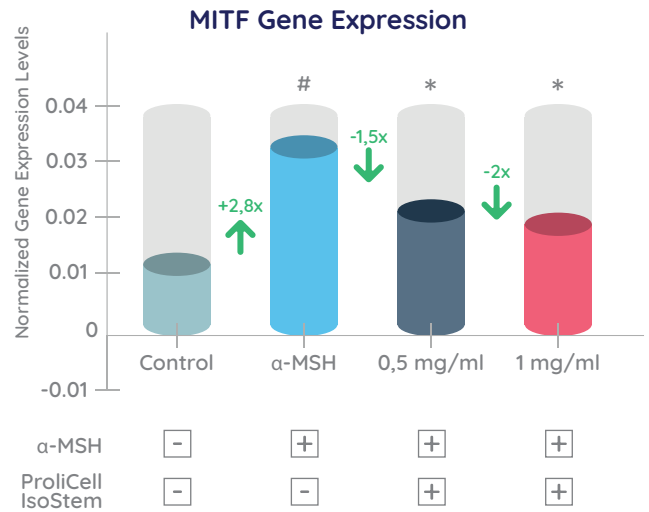
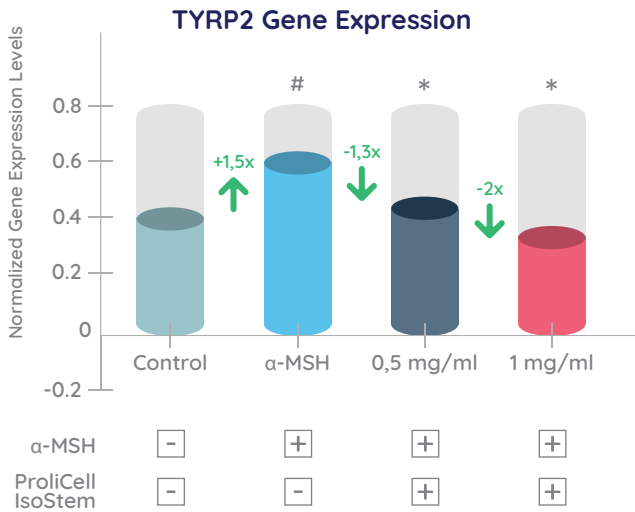
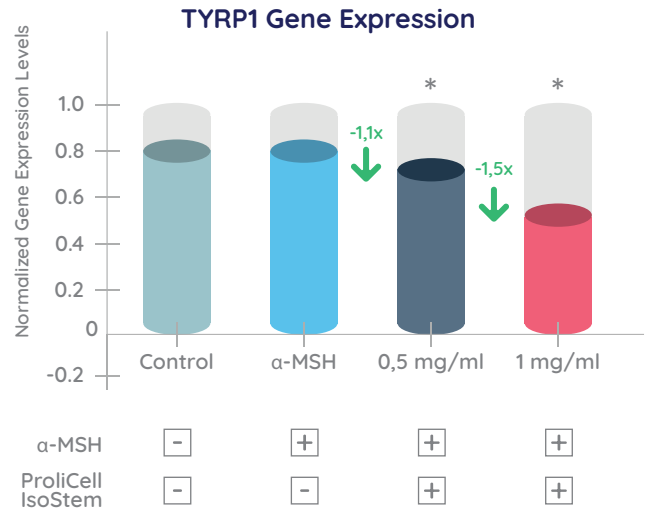
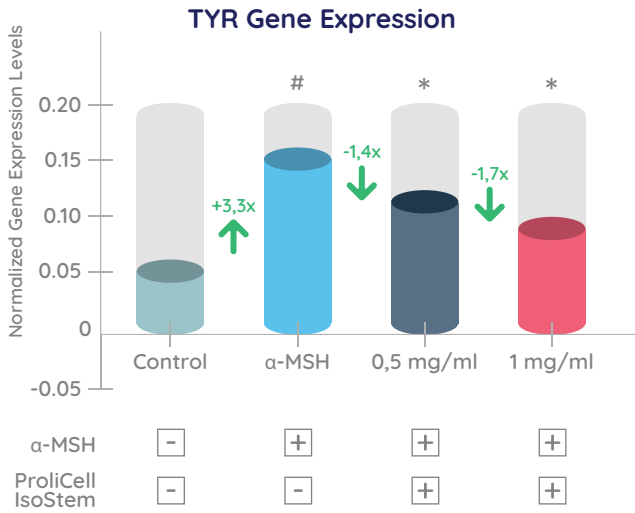


\*: It represents a significant change compared to the control group ( $p < 0.001$ ).

ProliCell IsoStem significantly suppressed melanin synthesis in melanoma cells and showed strong anti-tyrosinase activity in a concentration-dependent manner.

# Activity Tests

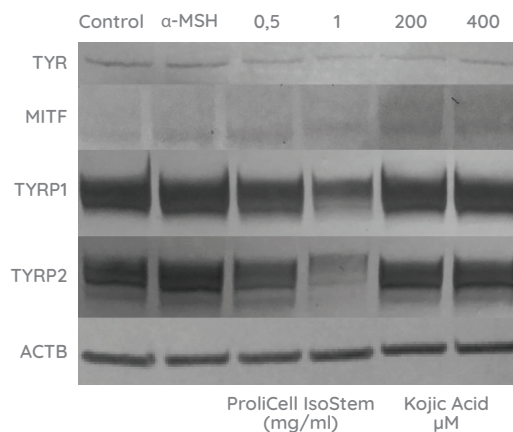
For gene and protein expression analysis, melanoma cells were incubated with ProliCell IsoStem concentrations for 48 hours.



#: represent significant change compared to the control group, \*: represent significant change compared to the α-MSH group (p<0.001)

ProliCell IsoStem, compared to the alpha MSH (α-MSH) group, significantly reduced the expression of Melanogenesis-related TYR, TYRP1, TYRP2 and MITF genes.

## Effect on Expression of Melanogenesis-related Proteins



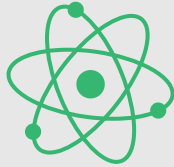
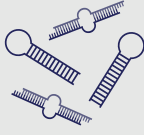
ProliCell IsoStem decreased the expression of melanogenesis-related proteins in a concentration-dependent manner.

# Molecular Solution to Skin Blemish



## Effect Mechanisms

- Anti-blemish
- Skin whitening



## Cosmetic Uses

- Anti-blemish Products (Face and Skin Care Products)
- Skin Lightening Products (Face and Skin Care Products)



**INCI name:** Glycerin, Glycine Max Callus Culture, Xanthan Gum.

**Kullanım oranı:** 2-5%

**Solubility:** Water-soluble

**Preservative:** No preservative

**pH:** 4.0-7.0



## Features

**Origin:** Herbal

**Appearance:** Viscous cell lysate suspension

**Color:** Yellow-orange

**Odor:** Characteristic

**Usage:** Add below 40°C in cold-hot processes.



+09 212 912 13 36 info@actvlab.com

www.actvbiotech.com @actvbiyoteknoloji

Karaağaç Mah. Mavi Zümrüt Sokak No.48 Büyükçekmece/İSTANBUL/TÜRKİYE

**ACTV**  
BIOTECH